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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ROLAND N. GORRELL, FRANK BOCHULA, TOM DAWDY, JEFF JOHNSON, and VINNIE BYRNE

Appeal 2015-007828
Application 13/397,903
Technology Center 2100

Before MARC S. HOFF, THU A. DANG, and CATHERINE SHIANG, *Administrative Patent Judges*.

DANG, *Administrative Patent Judge*.

DECISION ON APPEAL

I. STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) of the Examiner's Final Rejection of claims 1–3 and 5–21, which are all of the pending claims. Claim 4 has been canceled. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

A. THE INVENTION

According to Appellants, the invention "generally relates to the use of virtual tape libraries (VTLs) for use in disaster recovery (DR) of enterprise production data" and, more specifically, "to manners of migrating production data from a local VTL to one or more logical partitions of a remote, second-tier disk storage system" (Spec. ¶ 2).

B. EXEMPLARY CLAIM

Claim 1 is exemplary:

1. A method for use in disaster recovery (DR), comprising:

storing a first production dataset in one or more virtual tape volumes (VTV s) of a virtual tape library (VTL) at a production site, wherein the production site VTL comprises a first tier of disk storage having a first access time and a first capacity;

migrating copies of the one or more VTV s storing the first production dataset from the production site VTL to a first of a plurality of logical partitions of a virtual library extension (VLE) at a DR site over at least one network, wherein the DR site VLE comprises a second tier of disk storage having a second access time and a second capacity, and wherein at least one of: a) the second access time is slower than the first access time, and b) the second capacity is greater than the first capacity;

declaring a DR procedure at the production site; and

migrating copies of VTVs storing a second production dataset generated after the DR procedure declaration from the production site VTL to a second of the plurality of logical partitions of the DR site VLE, wherein the first production dataset was generated before the DR procedure declaration.

C. REJECTIONS

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Yanai	US 5,742,792	Apr. 21, 1998
Blendermann	US 6,317,814 B1	Nov. 13, 2001
Bish	US 2009/0055582 A1	Feb. 26, 2009
Chakravarty	US 7,831,793 B2	Nov. 9, 2010

Claims 1, 3, 5–13, and 19–21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bish and Yanai.

Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bish, Yanai, and Blendermann.

Claims 14–18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bish, Chakravarty, and Yanai.

II. ISSUE

The issue before us is whether the Examiner erred in finding the combination of Bish and Yanai teaches or would have suggested: "migrating copies of one or more VTVs [virtual tape volumes] storing the *first* production dataset *from the production site* VTL [virtual tape library] to a first of a plurality of logical partitions of a virtual library extension (VLE) *at a DR [disaster recovery] site*"; "declaring a DR procedure at the production site"; and "migrating copies of VTVs storing a *second* production dataset *generated after the DR procedure declaration from the production site* VTL to a second of the plurality of logical partitions *of the DR site* VLE" (claim 1, emphasis added).

III. FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

Appellants' Invention

1. Appellants' invention is directed to a DR setup, wherein Figure 3 is reproduced below:

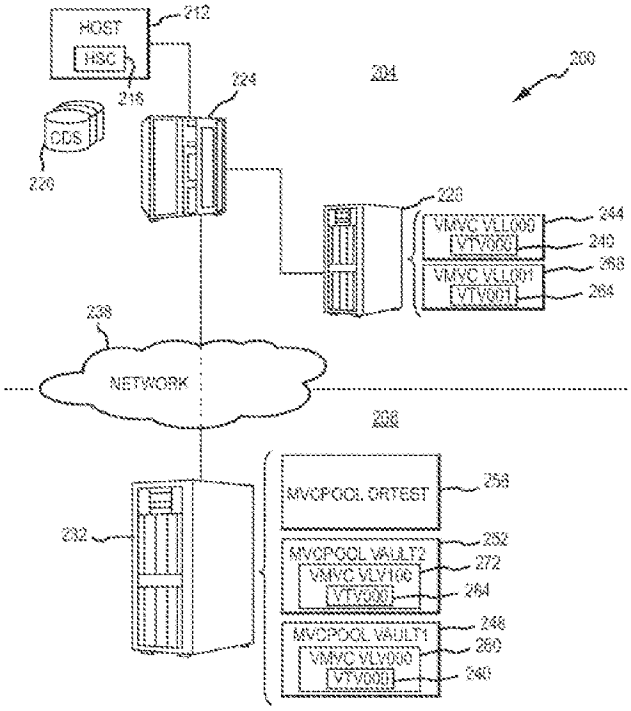

FIG.3

Figure 3 shows migration of data generated at the production site to a logical partition of a remote VLE at the DR site (¶ 21). A VTV 240 storing a first production dataset at production site 204 is migrated to a second tier of disk storage 232 at DR site 208 (¶ 29), wherein VLE includes a first logical partition 24 (¶ 30). After declaring a start to a DR procedure, a copy of VTV 268 is migrated from the production site VTL 224 to a second logical partition 252 in the DR site VLE 232 (¶ 31).

Bish

2. Bish discloses managing data movement operations between the host, a cache storage, and a secondary storage, wherein Figure 1 is reproduced below:

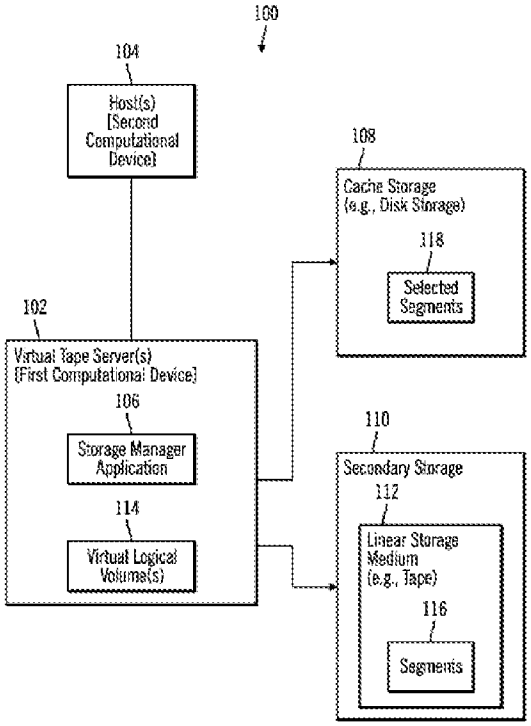

FIG. 1

Figure 1 shows a storage manager application 106 that maps data stored in the cache storage 108 and secondary storage 110 to a plurality of virtual logic volumes 114 (¶ 28). In response to a request for data received at VTS 102 from the host 104, the storage manager application 106 moves selected segments 118 of the plurality of segments 116 from the linear storage medium 112 to the cache storage 108 (¶ 29).

Yanai

3. Yanai disclose a primary data storage system that automatically controls the duplication or copying of data to a secondary data storage, wherein should a disaster or facility outage occur at the primary data storage

system site, the user will simply need to initialize the application program in the secondary data storage system (col. 10, ll. 14–27).

IV. ANALYSIS

Appellants contend that "the virtual tape volumes of Bish are not migrated in the first place and actually only reside in the VTS 102" (App. Br. 7). In particular, Appellants contend:

> Bish and Ya[n]ai do not disclose or suggest migrating copies of production data *generated before* declaration of a DR procedure to a *first logical partition* of a VLE at a DR site and migrating copies of production data *generated after* declaration of a DR procedure to a *second logical partition* of the VLE at the DR site

as required by claim 1 (App. Br. 8).

After reviewing the record on appeal, we find that the preponderance of evidence supports Appellants' position.

Bish discloses managing data movement operations between the host, a cache storage, and a secondary storage, wherein data stored in the cache storage and secondary storage are mapped to a plurality of virtual logic volumes (FF 2). Although the Examiner finds, in Bish, that "data is mapped to a virtual logical volume" which "shows the migrating of the data to the virtual volumes" wherein "more than one virtual volume can be created" (Ans. 3), we do not find any teaching or suggestion of *migrating* copies of a *VTV* storing a *first* production dataset "from the production site" VTL to a first partition of a VLE "at a DR site" and *migrating* copies of *VTVs* storing a *second* production dataset generated *after* a DR procedure declaration "from the production site" VTL to a second partition of "the DR site" VLE, as required by claim 1. That is, we find no teaching or suggestion in the relied portions of Bish of migrating VTVs, let alone a migration to first

logical partition of a VLE at a DR site before the DR procedure declaration and another to a second logical partition of a VLE at a DR site after the DR procedure declaration, as Appellants contend (App. Br. 8).

Further, Yanai merely discloses copying of data from a primary data storage to a secondary data storage, such that, should a disaster or facility outage occur at the primary data storage system site, the application program in the secondary data storage system is initialized (FF 3). Although the Examiner finds that "Yanai is used to teach specifically that copies of data are migrated from one location to another and the use of multiple virtual volumes" (Ans. 5), we agree with the Appellants that, even if combined, the cited portions of Bish and Yanai do not disclose or suggest the contested limitations. (App. Br. 8).

On this record, we are constrained to reverse the Examiner's § 103 rejection of independent claim 1, independent claim 19 similarly reciting the contested limitations and standing therewith (App. Br. 10), and claims 3, 5–13, 20, and 21 depending respectively therefrom over Bish and Yanai. The Examiner does not identify how Blendermann, Chakravarty or Yanai overcomes the deficiencies of Bish and Yanai. Thus, we also reverse the rejections of claim 2 over Bish and Yanai in further view of Blendermann, and of claims 14–18 over Bish, Chakravarty and Yanai.

IV. CONCLUSION AND DECISION

We reverse the Examiner's rejection of claims 1–3 and 5–21 under 35 U.S.C. § 103(a).

REVERSED